# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEBRASKA

MARTIN J. WALSH,	)
SECRETARY OF LABOR,	)
U.S. DEPARTMENT OF LABOR,	)
	)
Plaintiffs,	)
	)
v.	) CIVIL ACTION FILE
	) NO. 4:22-CV-3246
	)
PACKERS SANITATION SERVICES,	)
INC., LTD.,	)
	)
	)
Defendant.	)

## **DECLARATION OF DAVID KALAT**

I, David Kalat, hereby declare that the statements made in this Declaration, pursuant to 28 U.S.C. § 1746, are true and correct to the best of my knowledge and belief. I understand that false statements made herein are subject to the penalties of perjury and state as follows:

#### Introduction

- 1. I am over 18 years of age, I am a resident of the State of Illinois, and I am competent to testify to the matters stated in this declaration, and if called and sworn as a witness, I could and would testify competently and truthfully to the matters stated in it.
- 2. I have not been promised any benefit, or been coerced or threatened in any manner in exchange for the testimony in this declaration. I have been specifically informed that I am free to provide or decline to provide any information relating to the paragraphs below.
  - 3. I make this declaration voluntarily and of my own free will.
- 4. I am a Director at Berkeley Research Group, LLC ("BRG"), a leading global strategic advisory and expert services firm that provides independent expert testimony, litigation

support, data analytics and other services to major law firms, Fortune 500 corporations, government agencies, and regulatory bodies around the world. I am a member of the firm's Global Investigations + Strategic Intelligence practice group. I lead investigations involving data analytics and forensic computer examinations. I joined BRG in April 2015.

- 5. I received my Bachelor of Arts from the University of Michigan as a James B. Angell Scholar. I received my Master's Degree in Library and Information Science from the University of Illinois at Urbana-Champaign.
- 6. I am certified by the International Society of Forensic Computer Examiners (ISFCE) as a Certified Computer Examiner (license number 1666). I am licensed by the International Information System Security Certification Consortium as a Certified Information Systems Security Professional (license number 593527). I am a Certified Telecommunications Analyst. I am a licensed Private Detective in Illinois (license number 115.002487) and Texas (license number 52430601). I am a Certified Fraud Examiner (license number 621469), and I serve on the board of directors of the Chicago Chapter of the Association of Certified Fraud Examiners.
- 7. I am a member of the Sedona Conference, a nonprofit research and educational institute that sponsors a preeminent think-tank in the area of E-Discovery.
- 8. I publish technical and historical research with a focus on the history of information technology. Among my publications, I write a monthly feature for *LegalTech News* called "Nervous System" that approaches issues of data privacy and cybersecurity from a historical context. My articles on the intersection of information technology and the law have been published by the *Privacy & Cybersecurity Law Report*, *The Consumer Finance Law Quarterly Report*, *InfoSecurity Magazine*, and other publications. A complete list of my publications and prior expert

testimony is set forth in my attached CV.<sup>1</sup>

- 9. On November 14, 2022, I took into custody a Dell Latitude 5490 laptop that I understand was assigned by PSSI to a Worthington, MN plant supervised by Yarick Morales Vargas ("PSSI Laptop"). The PSSI Laptop is identified by serial number JXK2NF2. The laptop contained a 256 GB SK Hynix nvme Solid State Drive, identified by the serial number SMJ8CN45081090CK3M. The contents of this SK Hynix SSD were forensically preserved in .E01 format and verified through MD5 and SHA1 hash value verification ("Forensic Image"). All subsequent references to my examination of the PSSI Laptop and its contents should be understood to refer to my examination of this Forensic Image.
- 10. The operating system of the PSSI Laptop is Windows 10 Pro, version number 6.3, build number 19043. The computer name is "REM-SAFETY584," and the pertinent user account is "5490" with the Secure Identifier of S-1-5-21-2957992608-3516318928-3130737506-1001. The PSSI Laptop was set to Central time, but unless otherwise noted, all times reported herein are presented first in UTC, or Coordinated Universal Time, which is the time reference typically used in computer forensic analysis as a uniform point of reference.
- 11. I conducted an examination of the Forensic Image to determine whether any data had been deleted from the PSSI Laptop on October 13, 2022.
- 12. The Recycle Bin of the PSSI Laptop contains fourteen items, enumerated below with timestamps that indicate when each item was placed in the Recycle Bin.

<sup>&</sup>lt;sup>1</sup> My most recent Curriculum Vitae is attached as Exhibit 1.

File Name	Date/Time - UTC
NEW PPE checklist 2019.xlsx	3/19/2022 9:03
ppe accountability belly.docx	3/19/2022 9:03
ppe accountability Head.docx	3/19/2022 9:03
ppe accountability Trim.docx	3/19/2022 9:03
ppe accountability n loin.docx	3/19/2022 9:03
ppe accountability cut.docx	3/19/2022 9:03
ppe accountability Ham.docx	3/19/2022 9:03
ppe accountability o loin.docx	3/19/2022 9:03
ppe accountability Cassings.docx	3/19/2022 9:03
ppe accountability kill.docx	3/19/2022 9:03
PPE checklist 2019.xlsx	3/19/2022 9:03
2 min 7-24 O LOIN (version 1).xlsb	8/8/2022 7:47
PPE	10/13/2022 8:40
PPE Accountability Form.xlsx	11/10/2022 7:00

- 13. Items in the Recycle Bin are not "deleted," in so much as they continue to exist as data on the computer that is managed by the operating system. The Recycle Bin is merely a special kind of directory used by the operating system to manage files that may be deleted later. Only once items are deleted *from* the Recycle Bin, for example when the Recycle Bin is emptied, does the data become inaccessible.
- 14. I observed that because the Recycle Bin contains records of files that were placed into it on March 19, 2022, that the Recycle Bin on the PSSI Laptop has not been emptied at least since that date. Furthermore, the Recycle Bin does not contain records of any other deleted files or folders other than the fourteen items set forth above. As shown above, the only item that was sent to the Recycle Bin on October 13, 2022 is a folder titled "PPE."
  - 15. The Windows operating system does not record or maintain a timestamp

documenting when any file or folder is deleted.<sup>2</sup> Instead, the primary timestamps associated with a file or folder include the following: when a section of memory is allocated to store that item (this is logged as the "Created" timestamp); when a section of memory is rewritten to record a modification to that item ("Modified"); when certain actions or operations cause that section of memory to be read ("Accessed"); or when the metadata for that item is changed in the file system's Master File Table ("MFT Modified"). When a file or folder is moved to the Recycle Bin, the operating system renames that item with a system-assigned name. Because this action modifies the metadata for that item, the file system updates the MFT Modified timestamp. For the purposes of a forensic analysis, an examiner can usually interpret the MFT Modified timestamp for an item in the Recycle Bin as representing when that item was sent to the Recycle Bin.

- 16. As shown above, the PPE folder was sent to the Recycle Bin on October 13, 2022 at 8:40:14 AM UTC (3:40 AM Central). When I examined this Recycle Bin entry, I observed that the original file path recorded for the PPE folder was "\Users\5490\Desktop\PPE."
- 17. In my examination of the active file system on the PSSI Laptop, I observed that a folder with the name "PPE" is present in the "5490" user account at that file path location "\Users\5490\Desktop\PPE." The metadata of this folder indicates it was created on October 13, 2022 at 8:39:32 AM UTC (3:39 AM Central), and modified on October 13, 2022 at 8:42:38 AM UTC (3:42 AM Central).
- 18. When I examined the forensic image of the PSSI laptop, the PPE folder in the 5490 user account was found to be empty, containing no files. In order to determine whether the PPE folder had previously contained files, I examined a set of operating system records that log user

<sup>&</sup>lt;sup>2</sup> Information about file deletion is temporarily recorded in certain system logs but does not persist over time. On the PSSI Laptop, these system logs (\$LogFile and UsnJrnl) contain no records from prior to November 5, 2022.

access to files. When a user navigates to a file, for example to access it or open it for use, a record of the corresponding file path can be logged in multiple locations in the operating system including .LNK shortcut files, Jump Lists, Shellbags, browser records, Most Recently Used lists, and Windows Timeline records. I examined these records and found no indication that any file had ever been stored within the PPE folder.

- 19. Based on the observations set forth above, I conclude that on October 13, 2022 at 8:39:32 AM UTC (3:39 AM Central), the user of the PSSI Laptop created an empty directory titled "PPE," then moved this empty folder into the Recycle Bin approximately one minute later at 8:40:14 AM UTC (3:40 AM Central). Then at 8:42:38 AM UTC (3:42 AM central), the user moved the PPE folder back out of the Recycle Bin to its original location in the active user account, where it remained until my examination. As the folder itself never contained any files, and was not deleted from the computer, this activity did not result in the removal of any data from the PSSI Laptop.
- 20. I found no evidence of any other files or folders being moved into or out of the Recycle Bin on October 13, 2022.
- 21. When a file or folder is deleted from a Windows computer, the deletion of that item entails separate actions to overwrite its data and to remove its metadata from the file system's Master File Table ("MFT"). Records of deleted files can therefore persist in the MFT in the form of metadata that has not yet been overwritten. I examined the MFT of the PSSI Laptop for any records of files or folders that are designated as deleted, whether or not the corresponding data can be recovered. In my examination of the MFT, I found no records of any user-created file or folder that was deleted on October 13, 2022.
- 22. I examined the PSSI Laptop for evidence of the presence, installation, or use of any third-party data wiping tool. Examples of such tools include Eraser, CCleaner, DBan, and File

Shredder, among many others. I found no evidence of any such tool having been searched for, downloaded, installed, launched, or otherwise used.

23. In summary, after the examination detailed above, I found no evidence that any user-created data was deleted from the PSSI Laptop on October 13, 2022. I observed artifacts showing that an empty directory titled "PPE" was briefly moved into the Recycle Bin and then back to its original location, but this directory did not contain any files and was not deleted at any time.

24. Before signing this declaration, I was provided with a full opportunity to carefully review this Declaration and freely make any corrections and additions of any kind.

David Kalat

Dated: December 1, 2022

# EXHIBIT 1



#### **David Kalat**

# BERKELEY RESEARCH GROUP, LLC

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Direct: 312.429.7907 dkalat@thinkbrg.com

Mr. Kalat is an information scientist and a testifying expert in electronic evidence, digital forensics, data analytics, and information security. He is a licensed private detective, and the author of numerous publications on the history of information technologies.

He leads the Chicago digital forensics lab for BRG's Global Investigations + Strategic Intelligence practice group.

#### **EDUCATION**

- M.L.I.S University of Illinois at Urbana-Champaign, 2011
- B.A. University of Michigan, 1992, James B. Angell Scholar

#### **EMPLOYMENT**

- Director, Global Investigations + Strategic Intelligence, Berkeley Research Group (BRG), 2015–present
- Director, Disputes and Investigations, Duff & Phelps, 2011-2015
- President, All Day Entertainment, 1997-2008
- Operations Manager, DC Post/Interface Media Group, 1996-1997

#### PROFESSIONAL CERTIFICATIONS

- Licensed Private Detective (License No. 115.002487), State of Illinois (Sept. 12, 2015 present)
- Licensed Private Detective (License No. 52430601), State of Texas (July 31, 2018 present)
- Certified Fraud Examiner (CFE), Association of Certified Fraud Examiners (License No. 621469) (Oct. 28, 2013 present)
- Certified Computer Examiner (CCE), International Society of Forensic Computer Examiners (ISFCE) (License No. 1666) (Sept. 14, 2014 present)
- Certified Information Systems Security Professional (CISSP), International Information System Security Certification Consortium (ISC)2 (License No. 593527) (Feb. 2, 2017 present)
- Certified Telecommunications Analyst (CTA), Telecommunications Certification Organization (March 26, 2019 present)

#### PROFESSIONAL AFFILIATIONS

- Board of Directors, Association of Certified Fraud Examiners, Greater Chicago Chapter (2016 2017; 2020 - present)
- Member, Association of Certified Fraud Examiners Advisory Council (2022-present)
- Member, Sedona Conference (June 2018 present)
- Who's Who Legal: Consulting Experts Digital Forensics/Data (2019, 2020, 2021, 2022)



#### TESTIMONIAL EXPERIENCE

Rowan v. Brock Pierce, No. 3:20cv01648 (D. Puerto Rico, 2020)

On behalf of defendant in putative TCPA class action, provided declaration regarding data records pertaining to identification of putative class members.

Calhoun v FLRish, No. 3:19cv8212 (N.D. Calif., 2019)

On behalf of defendant in putative TCPA class action, provided expert report regarding data records from third-party communications vendors pertaining to identification of putative class members.

Dumas v. Paradise Exteriors, No. 9:22cv80356 (S.D. Fla., 2022)

On behalf of defendant in putative TCPA class action, provided declaration and rebuttal regarding the ability to reliably identify putative class members from the available records.

<u>Young v. Certegy Payment Solutions and Complete Payment Recovery Services</u> No. 1:21cv11037 (D. Mass., 2021)

On behalf of defendant in putative FCRA class action, provided expert report regarding the ability to identify discrete data sets related to Plaintiff's proposed class definitions.

AEG Holdco, LLC v Vazquez et al., No. 2:21cv05290 (C.D. Calif., 2022)

Provided expert report regarding forensic examination of various electronic data sources on behalf of plaintiff regarding alleged theft of trade secrets.

Rowan v. United Enrollment Services and Adroit Health Group, No. 9:22cv80235 (S.D. Fla., 2022)

On behalf of defendant in putative TCPA class action, provided expert report on the database records systems used by defendants to manage and track customer communications.

Cole v. Sierra Pacific Mortgage Co., No. 3:18cv01692 (N.D. Calif., 2018)

On behalf of defendant in putative TCPA class action, provided expert report on the technical capacity and functionality of the communication platform allegedly used by the Defendant's third-party vendor. The Court ruled in Defendant's favor on summary judgment and dismissed plaintiff's claims.

Hovanky and Jackson v. RealPage, Inc., No. 3:20cv586 (E.D. Va., 2020)

Provided expert report on public records-based investigations into criminal records and database design analysis on behalf of a defendant in a putative class action seeking claims under the FCRA.

Petruss Media Group v. Advantage Sales & Marketing LLC, AAA Case 1-19-0002-7532 (A.A.A., 2019) On behalf of Respondent and Counter-Claimant in a post-acquisition dispute, provided trial testimony on the accuracy, reliability, and functionality of a database of consumer contact information intended for use in digital marketing.

Rogers v BNSF Railway Company, No. 1:19cv03083 (N.D. Ill., 2019)

On behalf of defendants in putative class action alleging violations of Illinois' Biometric Information Privacy Act, provided written and deposition testimony on potential scope of affected class of truck drivers, and the information security protocols used to protect personal information pertaining to drivers.

PSSI Holdings LLC v. Calhoun, No. 5:21cv0080 (E.D. Tex., 2021)

Provided written report and testimony at hearing regarding forensic examination of various electronic data sources on behalf of plaintiff in alleged Computer Fraud and Abuse Act violation.



- Tichy, et al. v. Hyatt Corporation, et al., No. 1:18cv01959 (N.D. Ill., 2018)
  - On behalf of defendants in putative class action alleging violations of Sherman Act's anti-trust prohibitions, provided testimony on deficiencies in plaintiffs' preservation of electronic search and browsing records.
- Abante Rooter and Plumbing, Inc. v. Total Merchant Services, LLC, No. 3:19cv05711 (N.D. Calif., 2019) On behalf of defendant in putative TCPA class action, provided expert report on the technical capacity and functionality of the communication platform used by the Defendant.
- Signode Industrial Group LLC v. Rutzky, No. 2021CH00314 (Cook Cnty. Cir. Ct., 2021)

  Provided written testimony regarding forensic examination of various electronic data sources on behalf of plaintiff in alleged theft of trade secrets dispute.
- Brown v. RP On-Site, LLC, No. 1:20cv448 (E.D. Va., 2020)
  - Provided expert report on public records-based investigations into criminal records and sex offender records on behalf of a defendant in a putative class action seeking claims under the FCRA.
- State of Georgia v. Kathryn Schrader, No. 19-B-03161-5 (Gwinnett Cnty. Sup. Ct., GA, 2019)

  Testified at criminal jury trial on behalf of defendant Kathryn Schrader, a state court judge accused of felony computer trespass.
- Moskowitz v. American Savings Bank, FSB, No. 1:17-cv-00299 (D. Hawaii, 2017)

  On behalf of defendant in putative TCPA class action, provided expert report pertaining to forensic analysis of text message communications involving the plaintiff.
- Schaffer and Fabricant v. First Choice Payment Solutions, d/b/a Sekure Merchant Solutions, No. 8:18cv1981 (C.D. Calif., 2018)
  - On behalf of defendant in putative TCPA class action, provided expert report on the technical capacity and functionality of the communication platform used by the Defendant and the plaintiff's proposed methodology for class member identification.
- <u>Laramar Group, LLC v. Steven Boyack</u>, Arbitration Before JAMS, Ref. No. 1340015694 (JAMS, Chicago, Ill., 2017)
  - Provided written testimony regarding forensic examination of various electronic data sources on behalf of defendant in alleged theft of trade secrets dispute.
- <u>Trustwave Holdings, Inc. v. GoSecure, Inc., et al.</u>, No. 1:19cv05455 (N.D. Ill., 2019)

  Provided written testimony regarding forensic examination of various electronic data sources on behalf of plaintiff in alleged theft of trade secrets dispute.
- Bunnett & Co., Inc. and Energy Feeds Int'l., LLC v. J.D. Heiskell Holdings, LLC, et al., No. 3:17cv01475 (N.D. Calif, 2017)
  - Provided written reports and testimony before magistrate judge regarding forensic examination of various electronic data sources on behalf of plaintiff in dispute alleging breach of fiduciary duty.
- West Loop Chiropractic & Sports Injury Center v. North American Bancard, No. 1:16cv05856 (N.D. Illinois)
  - On behalf of defendant in putative TCPA class action, provided expert report and deposition testimony regarding analysis of fax logs.



Gonzalez v. TCR Sports Broadcasting Holding, LLP, No. 1:18cv20048 (S.D. Fla.)

On behalf of defendant in putative TCPA class action, provided declaration on use of data analytics to determine class membership.

Revitch v. Citibank, No. 3:17cv06907 (N.D. Calif., 2017)

On behalf of defendant in putative TCPA class action, provided expert report and deposition testimony regarding analysis of dialing technology used by defendant.

Flowers v. Twilio, Inc., No: RG16804363 (Sup. Ct. Cal.)

On behalf of defendant in putative class action under California Invasion of Privacy Act, provided declaration on use of data analytics to determine class membership.

Berman v. Freedom Financial Network, LLC, No. 4:18cv01060 (N.D. Calif., 2018)

On behalf of defendant in putative TCPA class action, provided expert report regarding analysis of lead generation data.

Marcheco v. Jo-Ann Stores, LLC, 1:18cv20564 (S.D. Fla., 2018)

On behalf of defendant in putative TCPA class action, provided expert report and deposition testimony regarding analysis of dialing technology used by defendant.

In the Matter of Tokenlot, LLC, Lenny Kugel, and Eli L. Lewitt, Securities and Exchange Commission Administrative Proceeding File No. 3-18739 (2018)

On behalf of defendant in SEC administrative proceeding, provided written report regarding destruction of cryptocurrency tokens.

Kolodziej v. Justice Park District, et al., 2014 L 775 (Cook Cnty. Cir. Ct., 2014)

Testified at jury trial regarding analysis of surveillance video, on behalf of defendant in alleged wrongful death.

<u>Indeck Energy Services v. DePodesta, et al.</u>, 14 CH 602 (Lake Cnty. Cir. Ct., 2014)

Submitted affidavits and written report regarding forensic examination of electronic data sources, on behalf of plaintiff in case alleging theft of trade secrets.

Braver et al. v. NorthStar Alarm Services, LLC, 5:17cv00383 (W.D. Okla., 2017)

On behalf of defendant in putative TCPA class action, provided written report, deposition testimony, and testimony at class certification hearing regarding use of data analytics to determine class membership.

<u>C.J. Drilling, Inc. v. Welsh</u>, No. 17 CH 001095 (Kane Cnty. Cir. Ct., 2017)

Submitted written report on behalf of plaintiff regarding forensic examination of electronic data sources in case alleging theft of trade secrets.

Western Union v. Kula, 1:17cv00280 (N.D. Ill., 2017)

Served as neutral in dispute alleging theft of trade secrets; forensic examination of electronic data sources.

Segerdahl Corp. v. Ferruzza, et al., 1:17cv03015 (N.D. III., 2017)

Provided written reports and deposition testimony as both expert witness and 30(b)6 witness regarding forensic examination of electronic data sources, on behalf of plaintiff in case involving alleged theft of trade secrets.



L&W Supply Corp. v. Banks et al., CV16-00816 (Washoe Cnty. Dist. Ct., 2016)

Submitted written report on behalf of plaintiff regarding forensic examination of electronic data sources in case alleging theft of trade secrets.

Bunnet & Co., Inc. and Energy Feeds International, LLC v. Dores, 1:15cv1104 (W.D. Texas, 2016); also In Re: Frank Miranda Dores and Mary Anne Souza Dores, No. 16-10169-B-13 (Bankr. E.D. Calif.)

Provided written reports and testimony at bankruptcy hearing regarding forensic examination of various electronic data sources on behalf of plaintiff in dispute alleging breach of fiduciary duty.

Pro Sapiens LLC v. Indeck Power Equipment Co., 14L5730 (Cook Cnty. Cir. Ct., 2015)

Provided written reports, deposition testimony, and testimony at hearing regarding forensic examination of various electronic data sources on behalf of plaintiff in dispute alleging data spoliation.

Geophysical Service Inc. v. Anadarko Petroleum Corp. et al., 1201-15228 (Ct. of Queen's Bench of Alberta, 2014)

On behalf of multiple defendants, provided deposition testimony regarding public records investigation into plaintiff's ability to satisfy a judgment.

### **PUBLICATIONS**

**Note:** Since 2018, I have contributed a monthly series for LegalTech News called "Nervous System," which approaches issues of data privacy and cyber security from the context of history. Individual installments of this series are itemized below, and all are collected centrally at

https://www.thinkbrg.com/insights/publications/kalat-legaltech-news-nervous-system/

<u>Day One: The Origin Story of Computer Forensics</u>, Pratt's Privacy & Cybersecurity Law Report (LexisNexis A.S. Pratt) Vol. 1 No. 1 (August/September 2015)

The Trouble With Mobile Forensics, ThinkBRGTech.com (October 15, 2015)

Anti-Forensics Gets An Upgrade: The Hidden Traps In Today's Latest Technology, ThinkBRGTech.com (June 27, 2016)

Dyn and Dash, SC Media (December 19, 2016)

<u>Understanding the Challenges of Strong Encryption</u>, Law360 (April 10 & 11, 2017)

Outrunning the Lion: Advice for Fighting on the Front Lines of Today's Data Breach Attacks, (Legal Tech News, December 20, 2017)

Fighting on Today's Front Lines, (InfoSecurity Magazine, Jan. 3. 2018)

Nervous System: The Story of the First White Hat Hacker (Legal Tech News, February 5, 2018)

Nervous System: Evaluating TCPA Liability in the Actual Wild West (Legal Tech News, March 1, 2018)

Confronting BIPA Liability in the Blink of an Eye (ThinkBRG Global I Blog, March 8, 2018)

Nervous System: The Boy Who Could Talk to Computers (Legal Tech News, April 5, 2018)

Nervous System: Just the Fax, Ma'am (Legal Tech News, May 3, 2018)

Nervous System: The Small Start of Big Data (Legal Tech News, June 4, 2018)

Nervous System: The AIDS Trojan Makes You WannaCry (Legal Tech News, July 9, 2018)

Nervous System: The Glamour Girl's Secret Privacy Weapon (Legal Tech News, August 6, 2018)



Nervous System: The Tech Revolution is Earlier Than You Think (Legal Tech News, September 4, 2018)

<u>How to Recognize Different Types of Dialers From Quite a Long Way Away</u> (The Consumer Finance Law Quarterly Report, Volume 72, No. 2 (2018))

Nervous System: What Hollywood Has Taught the U.S. Government About Cybersecurity (Legal Tech News, October 12, 2018)

Nervous System: Taking Biometrics at Face Value (Legal Tech News, November 2, 2018)

<u>The Digital Detective: The History of Passwords and the Case of the First Theft</u> (ThinkSet Issue 6, November 4, 2018)

Nervous System: The Computer That Taught HAL to Sing (Legal Tech News, December 3, 2018)

<u>Nervous System: The Day Grace Hopper Literally Debugged a Program</u> (Legal Tech News, January 7, 2019)

Nervous System: The Dawn of Spam (Legal Tech News, February 4, 2019)

Nervous System: Big Brother, the Ghost in LBJ's Computer (Legal Tech News, March 5, 2019)

The Digital Detective: The Evolution of Intellectual Property Rights: From Punch Cards to Pixels (ThinkSet Issue 7, March 7, 2019)

Nervous System: The First Social Network (Legal Tech News, April 2, 2019)

<u>Nervous System: Think Cryptocurrency is New? You've Forgotten the '80s</u> (Legal Tech News, May 7, 2019) <u>The Digital Detective: Why Use Encryption? Because Business Needs A Free Flow Of Ideas</u> (ThinkSet, May 16, 2019)

You Can't Change Your Fingerprints, But Do You Need To? The Evolution of Biometric- and Password-Based Authentication Security, Pratt's Privacy & Cybersecurity Law Report (LexisNexis A.S. Pratt) (Part I - May 28, 2019; Part II – September 4, 2019)

Nervous System: The Great Fixer of Information Coding Errors (LegalTech News, June 4, 2019)

Nervous System: The Day the NSA Took Down the Military (LegalTech News, July 3, 2019)

Nervous System: The First Modern Presidential Campaign (LegalTech News, Aug. 5, 2019)

Nervous System: Clipping the Wings of the Clipper Chip (LegalTech News, Sept. 3, 2019)

<u>The Digital Detective: The Case of the Tasteless T-Shirts That Created the Internet As We Know It</u> (ThinkSet, Sept. 5, 2019)

Nervous System: How Legal Tech Helped Catch the BTK Killer (LegalTech News, Oct. 7, 2019)

<u>Nervous System: Passwords Became More Secure By Adding a Pinch of Salt</u> (LegalTech News, Nov. 5, 2019)

Nervous System: Claude Shannon's Magic Mouse and the Beginnings of Artificial Intelligence, (LegalTech News, Dec. 10, 2019)

The Digital Detective: They Came to Rob Star Wars (ThinkSet, Jan. 9, 2020)

<u>Nervous System: The Countess of Lovelace, the First Computer Programmer</u> (LegalTech News, Jan. 10, 2020)

Nervous System: Alan Turning's Gin Memory (LegalTech News, Feb. 10, 2020)

Nervous System: UNIVAC Predicts the Next President (LegalTech News, March 3, 2020)

Nervous System: How Punch Cards Brought Us to Our Census (LegalTech News, April 1, 2020)



<u>The Seven Layer Cake of Information Security: A Technical Guide for the Non-Technical Reader</u> Pratt's Privacy & Cybersecurity Law Report (LexisNexis A.S. Pratt) (Vol. 6, No. 3, April 2020)

Nervous System: The Triumphs of a Lazy Programmer (LegalTech News, May 5, 2020)

Nervous System: Teaching Machines to See Faces (LegalTech News, June 5, 2020)

Nervous System: The Unexpected History of VoIP (Legaltech News, July 7, 2020)

Nervous System: The Police Beat Algorithm and Automated Criminal Justice Information Systems (LegalTech News, Aug. 4, 2020)

<u>Demystifying Blockchain and Cryptocurrencies</u> (The Journal of Robotics, Artificial Intelligence & Law, Vol. 3, No. 6, Nov.-Dec. 2020)

Nervous System: The Inventor, the Barbershop Quartet, and the Origin of the Email Attachment (LegalTech News, Sept. 1, 2020)

Nervous System: The Sleepy History of the Buffer Overflow Attack (LegalTech News, Oct. 7, 2020)

Nervous System: Before the Battle Over 5G There Was the Battle Over 3G (LegalTech News, Nov. 9, 2020)

Nervous System: The First Major Data Breach, 1984 (LegalTech News, Dec. 8, 2020)

Nervous System: Dialing for Dollars (LegalTech News, Jan. 8, 2021)

<u>Nervous System: How 'The 414s' Hacking for Video Game High Scores Led to Federal Cyber Law</u> (LegalTech News, Feb. 8, 2021)

<u>Dispossessed, Beyond Custody, and Out of Control: Where the Stored Communications Act and the Federal</u>
<u>Rules of Civil Procedure Meet Modern Communications Technology</u> Pratt's Privacy & Cybersecurity
Law Report (LexisNexis A.S. Pratt) (Vol. 7, No. 2, February 2021)

Nervous System: Computer Crime and Punishment (LegalTech News, March 2, 2021)

Nervous System: Oliver North and the Origin Story of Legal Technology (LegalTech News, April 6, 2021)

The Digital Detective: Why Computers Aren't Patented (ThinkSet, April 26, 2021)

Nervous System: Audrey, the Dragon, and the History of Voice Recognition Technology (LegalTech News, May 5, 2021)

Nervous System: The CPU ARM Race Had Its Start in the '80s (LegalTech News, June 7, 2021)

Nervous System: SafeBack in the Day (LegalTech News, July 6, 2021)

Nervous System: Florida Man, Joe Biden, and the Federal Computer Crimes Act (LegalTech News, August 4, 2021)

Nervous System: Dumpster Diving for Fraud and Profit (LegalTech News, September 1, 2021)

<u>Nervous System: Engineering the Next Generation of Computer Users with the Alto</u> (LegalTech News, Oct. 4, 2021)

Nervous System: Rethinking Voice Recognition at the Canada Border (LegalTech News, Nov. 2, 2021)

Nervous System: The Computer Virus That Wasn't (LegalTech News, Nov. 30, 2021)

Nervous System: The Computer Crime of the Century (LegalTech News, Jan. 6, 2022)

Nervous System: Knowing Your Place in the World (LegalTech News, Feb. 1, 2022)

Nervous System: Presenting Our Next Witness, the iPhone (LegalTech News, March 2, 2022)

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